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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,358

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EXAMINER

MINSKEY, JACOB T

ART UNIT

PAPER NUMBER

4151

NOTIFICATION DATE

DELIVERY MODE

09/19/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/553,358	Applicant(s) AHLGREN ET AL.	
	Examiner JACOB T. MINSKEY	Art Unit 4151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 7-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 32-34 is/are rejected.
- 7) ☐ Claim(s) 1-6 and 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/16/07, 10/10/07, 10/14/05-(5)</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 7-31 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim 3. See MPEP § 608.01(n). Accordingly, the claims 7-31 have not been further treated on the merits.
2. Claims 1-32 are objected to because of the following informalities: All claims have the misspelled bold faced word “characterised.” Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 33, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Freeman et al, USP 5,551,975.
5. Regarding claim 33, Freeman et al teach:
Use of inorganic colloidal particles (liquid colloidal silicas, column 3 line 67) having an average particle size less than 100 nm (7nm, column 4 lines 9-11) in paper manufacturing (column 2 lines 45-53) for filler pre-treatment before addition of the filler into an aqueous suspension of cellulose (column 6 lines 36).

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6. Regarding claim 34, Freeman remains as applied in claim 33 and further teach that the inorganic colloidal particles are anionic (liquid colloidal silicas, column 3 line 67).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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10. Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman et al, USP 5,551,975 in view of Satterfield et al, USP 5,755,930.

11. Regarding claim 1, Freeman teach:

A process for manufacturing of paper (column 2 lines 45-53), in which a filler is pre-treated and suspended to form an aqueous slurry (column 4 lines 17-19), the aqueous slurry obtained is combined with an aqueous suspension containing cellulose fibers to form a stock (column 6 lines 36), the stock obtained is treated at least with a cationic retention agent (clay, column 3 line 49), characterized in that the filler is pre-treated with inorganic colloidal particles (liquid colloidal silicas, column 3 line 67) having an average particle size in water less than 100 nm (7nm, column 4 lines 9-11).

12. Freeman does not explicitly teach that the treated stock is filtered and dried in the form of paper.

13. In the same field of endeavor of production of paper using filler, Satterfield et al teach that the treated stock is filtered and dried in the form of paper (column 1 lines 15-19) for the benefit of producing paper from the aqueous slurry.

14. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Satterfield's method of paper formation in the Freeman method for the benefit of producing paper from the aqueous slurry (see Freeman USP 5,551,975 column 6 lines 35-38).

15. Regarding claim 2, Freeman remains as applied in claim 1 and further teach that the filler is treated with inorganic colloidal particles (liquid colloidal silicas, column 3 line

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67) so that the surface of the filler particles will at least partly consist of inorganic colloidal particles (surface modified slurry, column 2 line 8).

16. Regarding claim 3, Freeman remains as applied in claim 1 or 2 and further teach that the filler is pre-treated with inorganic anionic colloidal particles (liquid colloidal silicas, column 3 line 67).

17. Regarding claim 4, Freeman remains as applied in claim 3 and further teach that the anionic colloidal particles consist of synthetic silicate (sodium aluminosilicates (SAMS), column 6 line 50) and/or hectorite.

18. Regarding claim 6, Freeman remains as applied in claim 3 and further teach that the anionic colloidal particles consist of colloidal silica sol and/or polysilicic acid (liquid colloidal silicas, column 3 line 67).

19. Claims 5 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman et al, SP 5,551,975 in view of Satterfield et al, USP 5,755,930, and in further view of Neivandt et al, US Patent Publication 2005/0150621.

20. Regarding claim 5, Freeman and Satterfield remains as applied in claim 3, but does not explicitly teach that the anionic colloidal particles consist of smectite or montmorillonite-based (bentonite) silicate.

21. In the same field of endeavor of treating pulp fillers, Neivandt et al teach that the anionic colloidal particles consist of smectite or montmorillonite-based (bentonite) silicate (montmorillonite and bentonite, [0026]) for the benefit of providing an anionic inorganic colloid to increase the retention of the paper manufacturing.

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22. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Neivandt's use of bentonite as the anionic colloid in the Freeman/Satterfield method for the benefit of providing an anionic inorganic colloid to increase the retention of the paper manufacturing.

23. Regarding claim 32, Freeman et al teach:

A process for manufacturing of paper (column 2 lines 45-53), in which titanium dioxide is pre- treated and suspended (spacer particle, column 2 line 19), the aqueous slurry obtained is combined with an aqueous suspension containing cellulose fibers to form a stock (column 6 lines 36), the stock obtained is treated at least with a cationic retention agent (clay, column 3 line 49), and the treated stock is filtered and dried in the form of paper, characterized in that titanium dioxide is pre-treated with colloidal metal silicate (colloidal silica, column 2 line 18) pertaining to synthetic silicates and having an average particle diameter in the range of 1-25 nm (7nm, column 4 line 11).

24. Freeman does not explicitly teach that the treated stock is filtered and dried in the form of paper.

25. In the same field of endeavor of production of paper using filler, Satterfield et al teach that the treated stock is filtered and dried in the form of paper (column 1 lines 15-19) for the benefit of producing paper from the aqueous slurry.

26. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Satterfield's method of paper formation in the Freeman method for the benefit of producing paper from the aqueous slurry (see Freeman USP 5,551,975 column 6 lines 35-38).

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27. The previous combination does not explicitly teach the synthetic silicate having magnesium as the predominant metal.

28. In the same field of endeavor of treating pulp fillers, Neivandt et al teach that the synthetic silicate having magnesium as the predominant metal (talc, [0024]) for the benefit of providing a magnesium based inorganic colloid to increase the retention of the paper manufacturing.

29. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Neivandt's use of bentonite as the anionic colloid in the previous combination for the benefit of providing a magnesium based inorganic colloid to increase the retention of the paper manufacturing.

Conclusion

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

31. USP 6,143,064 Virtanen, Pentti teaches the use of fillers in paper manufacturing

32. USP 6,743,286 to Wen et al teaches the making and uses of inorganic particles in paper manufacturing

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACOB T. MINSKEY whose telephone number is (571)270-7003. The examiner can normally be reached on Monday to Friday 7:30-5:00 EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on 571-272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JTM

***/Angela Ortiz/
Supervisory Patent Examiner, Art Unit 4151***